



What is Food Protection and Why it Matters!

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Facts and Figures

U.S. Food and Agriculture Industries:

- o Generate more than \$1 trillion in economic activity
- o Employ more than 10 million people
- o Provides an abundant and safe food and fiber supply

Protecting this sector and the well-being of all that depend upon it for food represents a difficult, yet critically important responsibility.

Owners and Operators

- 2.1 million farms
- 37,074 manufacturing firms
- 74,656 wholesalers
- 4,871 warehouse companies
- 34,633 packaging firms
- 198,814 transportation companies
- 153,277 retail grocery and specialty food chains
- 175,000 direct marketers
- 68,866 convenience store owners
- 24,861 mixed-type facilities owners

Food Sector Background

- In 2007, a National Restaurant Association economic analysis concluded that:
 - 925,000 restaurants reach \$511 billion in sales/year
 - 34,000 supermarkets will reach \$460 billion in sales/year
 - Sector also consists of 13,000 smaller food markets, 1,000 wholesale club stores, 13,000 convenience stores, and 28,000 gas station food outlets

Indiana Background

- In Indiana there are approximately:
 - 30,000 restaurants
 - 1500 grocery stores
 - 1000 food processors

Since 9/11

- Food and Agriculture has been designated one of 17 critical infrastructures and Key Resources to protect from attack
- The Department of Homeland Security and the FBI are now assisting the Food Sector in Preparedness efforts
- Private industry and Academia are vitally important as stakeholders in protecting the infrastructure

CDC Estimates:

- Foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States each year

Definitions

- Food Safety- is a scientific discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness
 - Protecting the food supply from unintentional contamination

Definitions

- Food Quality- is the quality characteristics of food that is acceptable to consumers.
 - This includes external factors such as appearance (size, shape, color, gloss, and consistency), texture, and flavor; factors such as federal grade standards and internal (chemical, physical, microbiological)

Mass Foodborne Illness Outbreaks

- 1991-China- 300,000 ill from consuming clams contaminated with Hepatitis
- 1994-USA- 224,000 ill from consuming ice cream containing Salmonella
- 2006-USA- 187 ill from Spinach containing e-coli 0157-H7
- 2009- Salmonella in peanut butter- cases in at least 43 States

Definitions

- Food Defense- activities associated with protecting the nation's food supply from deliberate/intentional acts of contamination or tampering

Foods Identified as Being High Risk for Intentional Contamination

- Large Batch size, resulting in large number of servings
- Short shelf life, resulting in rapid turnaround at retail and rapid consumption
- Uniform mixing of contaminant into food
- High accessibility to critical nodes along the farm-to-fork continuum

Historical Perspective

- Throughout human history, intentional application of poisoned food has been used as a method of assassination, murder, suicide, and execution





Historical Perspective

- Prior to 1982, consumer product tampering was virtually unknown
- 1982 Chicago Tylenol murders
- 1984 Rajneesh Cult Incident
- 1986 Tylenol, Excedrin, & Lipton Cup-A-Soup
- 1991 Sudafed
- 1992 Goody's Headache Powder

Intentional Food Contamination

Dalles, Oregon

- 1984 - Rajneesh cult members contaminate salad bars in local restaurants with salmonella
- Attempt to influence local elections (a test)
- Over 700 people become sick



Michigan - 2002



- Disgruntled employee contaminates over 200 pounds of ground beef with insecticide
- Packages tainted meat in 1 to 3 pound portion containers for sale to customers
- Over 100 persons become ill

New Sweden, Maine

- 2003 - Homicide investigators interview town residents to find out why coffee laced with poison was served to church members
- One man dead, a dozen others become sick
- Lab tests confirm arsenic as the causative agent



Chinese Melamine Incident 2008

- 300,000 Reported Illnesses
 - 860 infants hospitalized
 - 6 infant deaths
- 2 Chinese milk industry executives sentenced to death
- Chinese Minister of Food Safety was executed

Does it happen here?

- 2002- Lagrange, IN- A Shipshewana man was ordered to perform 200 hours of community service for putting pine scented cleaner in milk that he sold to an area cheese factory
- 2004- LaPorte, IN- farmer lost eight acres of corn valued at \$30,000 after someone filled a crop sprayer with weed killer instead of insecticide

Does it happen here?

- 2005- Bloomington, IN,- Monroe County Health Department receives letter from someone threatening to contaminate local salad bars
- 2007- Food Protection receives information about someone threatening to contaminate certain soda pop products

Consumer Confidence

- 2007 Study by the Food and Marketing Institute found:
 - 66% of American Shoppers are confident the food they buy is safe
 - 38% said they stopped buying items linked to food outbreaks

Relevant Law:

- Terrorism: IC 35-47-12-1
- Agricultural Terrorism: IC 35-47-12-2
- Food Tampering: IC 35-45-8-3
- Interstate Food Tampering:
 - Federal Anti-Tampering Act
 - USC 18- Part 1- Ch65- 1365

Definitions

- Foodborne Illness- is any illness resulting from the consumption of contaminated food.
 - There are two types of foodborne Illness: food infection and food intoxication.



**Food
Contamination
Risk Reduction**

Food Protection

Guidelines & Recommendations

Rules & Regulations

Food System Attack

Food System Failure

Food Defense

Food Safety

Intentional Contamination

Unintentional Contamination

- Raise Awareness
- Identify and prioritize critical nodes
- Vulnerability Assessment
- Vulnerability Reduction Plans, Mitigation Strategies
- Deter Threats (Hardening a Soft Target)

PREVENTION

- Government & Industry Training
- Food Inspections
- HACCP Programs
- Routine Monitoring and Surveillance
- Sampling

- Emergency Response Plans
 - Food
 - Animal Disease
 - Plant

RESPONSE

- Foodborne Illness Investigations
- Environmental Investigations
- Laboratory Investigation/analysis
- Complaint Investigations

- Food, Animal, Plant Disposal Plans
- Decontamination Plans
- Restore Consumer Confidence

RECOVERY

- Provide Information to Consumers/Industry
- Assist Food Industry Resume Operations
- Damage Assessments

Foodborne Illness Investigations

- Epidemiology-cause of disease
- Environmental-cause of contamination
- Laboratory- agent/toxin causing disease

If intentional contamination is suspected:

- Criminal- forensic evidence to find perpetrator of crime

Changing Times

- Shifting demographics
 - Increasing immunocompromised segment of population
- Convenience trends
 - Consuming more fast-foods and bringing prepared foods home to eat
- Consumption patterns
 - More foods available year round
- Global Food Supply- More imports

Structure

- Federal Agencies- Set Federal rules & guidance
- State Agencies- Adopt federal rules & guidance or draft their own
- Local Agencies- Adopt State rules & guidance or adopt their own
- Private industry- Must follow rules (should follow guidance) and assume liability if they produce an unsafe product

CDC Food Defense Grant Objectives

- Conduct risk and vulnerability assessments
- Develop interventions/mitigation strategies
- Develop the capability to respond effectively
- Test and exercise plans

ISDH Food Defense Program Overview



- Raising Awareness
- Food Processor Assessment
- IN State Fair Assessment
- Retail Food Assessment
- Food Emergency Response Plan (FERP)
- Interstate Food Transportation Assessment Project (IFTAP)

IN Food Processing and Distribution Security Survey

- Survey Response
 - 934 surveys to processors/distributors
 - Including ISDH, FDA, Egg, Meat, & Dairy
 - 245 survey responses received-26%
- New York/Indiana Survey Comparison

Fair and Festival Food Defense

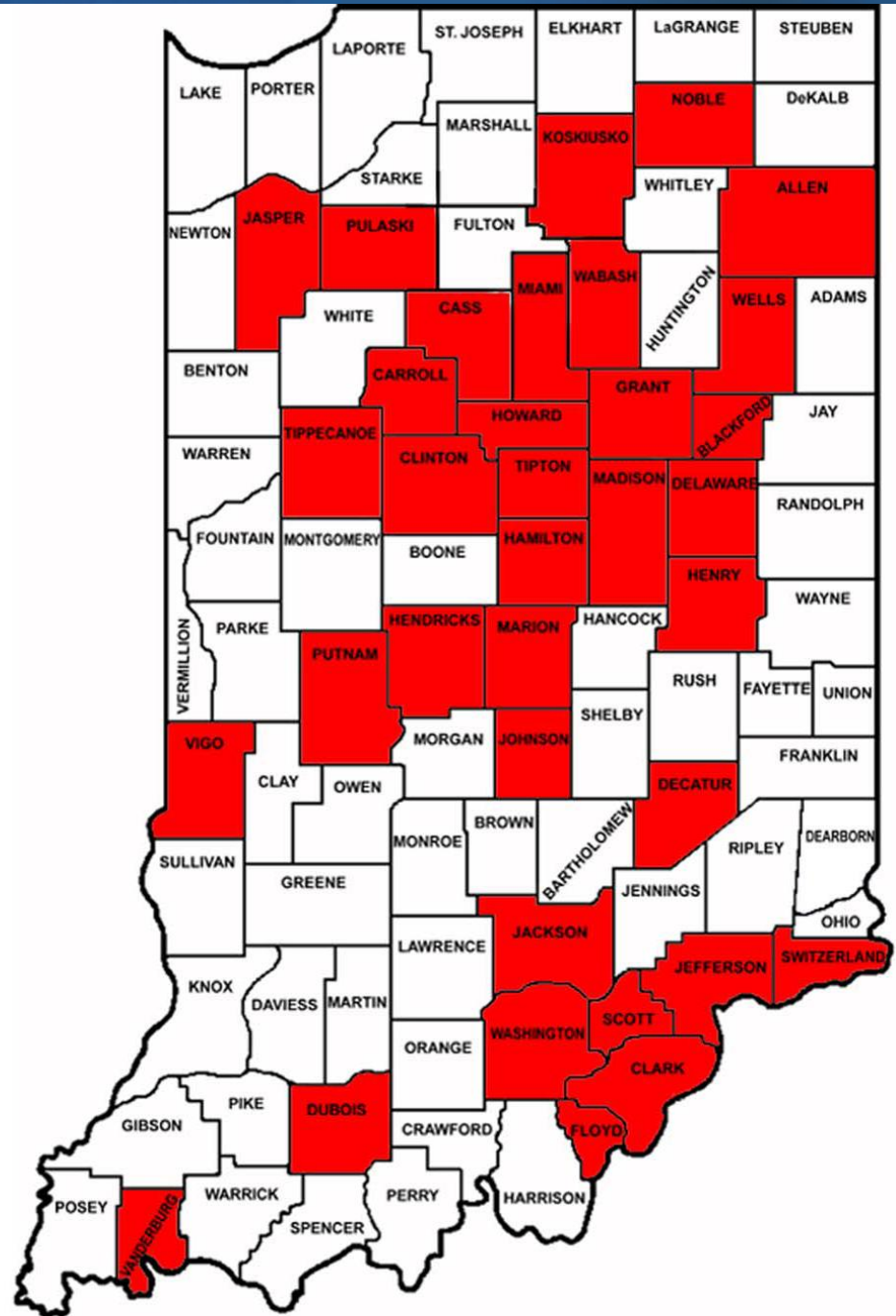


- Condiments
- Security of food stands and food storage
- Food safety overlap

Retail Food Defense Project Assessment

- ISDH Developed a Retail Food Security Checklist and a corresponding educational brochure to be utilized by both inspectors and restaurant managers/owners

Participating Counties in the Retail Food Security Assessment Project



Goal of the ISDH Food Emergency Response Plan (FERP)

- Ensure an effective, coordinated response to a food emergency situation to minimize illness and mortality and resume normal operations

Plan Objectives

- Identify ISDH staff who can activate the FERP by establishing a Food Emergency Assessment Team
- Ensure effective and coordinated communication between federal, state, and local responders and the public
- Identify and define roles and responsibilities of supporting agencies and groups
- Provide contact information and procedures to facilitate rapid response to a food emergency situation

What is expected of the states in food emergencies?

- National Planning Scenario 13- Food Contamination- is a preparedness baseline for a state food emergency response
- We should be prepared to handle 1200 illnesses, including 400 hospitalized in ICU, and 300 dead in 11 days

IFTAP Overall Project Goal

- To determine the current state of food safety and defense of food in transit in interstate commerce

Overall Objective

- Identify and test mechanisms for effective coordination between:
 - State Department of Health
 - Board of Animal Health
 - State Police- Motor Carrier Enforcement
 - Other Midwest States
 - Federal and Local Agencies

Trucking Statistics

- 73% of all goods are shipped by truck
- 90% of the US food supply is transported by truck
- Truck traffic is expected to double by the year 2020

Main Focus Areas

- Lack of refrigeration
- Cross-contamination
- Unknown food sources
- Lack of appropriate labeling
- Packaging
- Pest Activity
- Unsanitary food storage
- Security of food loads
- Driver knowledge of food safety & defense

ISP Facilities



Why it Matters

- We know there are people out there who want to cause us harm
- We are in the best position ever to minimize illness and mortality due to foodborne illness
- We must position ourselves to be able to respond effectively to any massive foodborne disease outbreak to avoid consumer panic

What You Can Do

- Offer your support to assist with
 - Consumer/industry education and training
 - Recommend Food Defense planning/assessments
 - Food recalls
 - Reaching out through your contacts to the agriculture community (if necessary)
- Leverage new technology to share info

Food Protection From Farm to Fork!

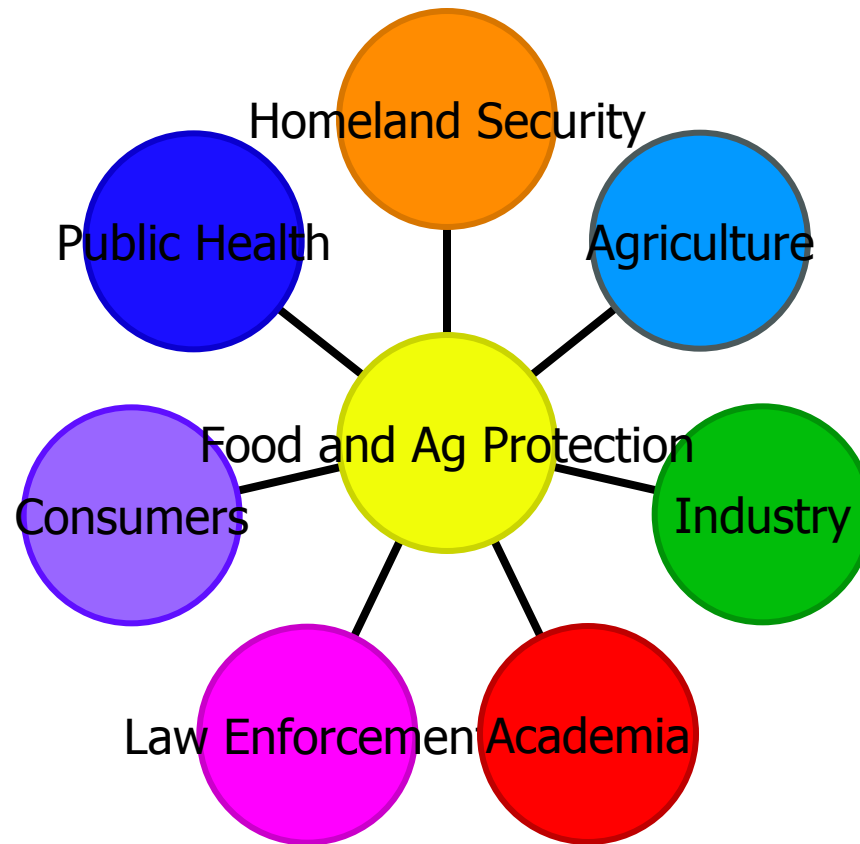


truck
railroad
boat

truck
railroad
boat

truck
railroad

We are all stakeholders in protecting our food supply!



Questions?

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Farmland Defense Mascot

